WHAT IS CLAIMED IS:

1. A method for detecting and reporting an in-flight alert condition of an aircraft using a computer system, comprising:

monitoring one or more flight characteristics of the aircraft;

comparing at least one of the flight characteristics to one or more normal flight characteristics to assess an alert condition of the aircraft; and

reporting the alert condition of the aircraft.

2. The method of claim 1, wherein the alert condition comprises an alert level of the aircraft corresponding to a danger level or threat level of the aircraft based on at least one of the flight characteristics.

3. The method of claim 1, further comprising changing the alert condition when at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

4. The method of claim 1, further comprising alerting a user of one or more abnormal flight characteristics of the aircraft if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

5. The method of claim 1, further comprising increasing the alert condition when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.

6. The method of claim 1, further comprising increasing the alert condition to a selected level when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.

7. The method of claim 6, wherein the selected level of the alert condition is determined by the predetermined value of the at least one of the normal flight characteristics that has been deviated from.

8. The method of claim 1, further comprising increasing the alert condition to a first selected level when at least one of the flight characteristics deviates from a first predetermined value of at least one of the normal flight characteristics or increasing the alert condition to a second selected level when at least one of the flight characteristics deviates from a second predetermined value of at least one of the normal flight characteristics.

9. The method of claim 1, further comprising visually reporting the alert condition of the aircraft.

10. The method of claim 1, further comprising reporting the alert condition of the aircraft on a display.

11. The method of claim 1, further comprising defining a proximity alert volume around the aircraft.

12. The method of claim 11, further comprising providing an alarm if another aircraft enters the proximity alert volume.

13. The method of claim 11, further comprising increasing boundary conditions of the proximity alert volume if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

14. The method of claim 1, further comprising defining a boundary of an area, wherein the area is an area in which the aircraft is restricted from traveling.

15. The method of claim 14, further comprising providing an alarm if the aircraft crosses the area boundary.

16. The method of claim 14, further comprising increasing boundary conditions of the area boundary if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

17. The method of claim 1, further comprising defining an exclusive area for the aircraft.

18. The method of claim 17, further comprising providing an alarm if the aircraft enters the exclusive area.

19. The method of claim 17, further comprising increasing boundary conditions of the exclusive area if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

20. The method of claim 1, further comprising modifying one or more of the flight characteristics if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

21. The method of claim 1, further comprising modifying at least one of the normal flight characteristics based on a flight phase of the aircraft.

22. The method of claim 21, wherein the flight phase comprises a takeoff of the aircraft.

23. The method of claim 21, wherein the flight phase comprises the aircraft enroute.

24. The method of claim 21, wherein the flight phase comprises an approach of the aircraft.

25. The method of claim 21, wherein the flight phase comprises a landing of the aircraft.

26. The method of claim 1, wherein at least one of the flight characteristics comprises a horizontal velocity of the aircraft.

27. The method of claim 1, wherein at least one of the flight characteristics comprises a vertical velocity of the aircraft.

28. The method of claim 1, wherein at least one of the flight characteristics comprises a rate of heading change of the aircraft.

29. The method of claim 1, wherein at least one of the flight characteristics comprises an altitude of the aircraft.

30. The method of claim 1, wherein at least one of the flight characteristics comprises a speed change of the aircraft.

31. The method of claim 1, wherein at least one of the flight characteristics comprises a heading of the aircraft.

32. The method of claim 1, wherein at least one of the flight characteristics comprises an IFF signal of the aircraft.

33. The method of claim 1, wherein at least one of the flight characteristics comprises route deviation distance of the aircraft.

34. The method of claim 1, wherein at least one of the flight characteristics comprises route deviation angle of the aircraft.

35. A method for detecting and reporting a state of an aircraft using a computer system, comprising:

monitoring one or more flight characteristics of the aircraft;

assessing a dynamic state of the aircraft from the one or more flight characteristics;

comparing the dynamic state of the aircraft to a normal dynamic state for the aircraft; and

modifying one or more boundary conditions of an alert for the aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one normal flight characteristic of the normal dynamic state.

36. The method of claim 35, further comprising defining one or more normal boundary conditions of the alert corresponding to the normal dynamic state of the aircraft.

37. The method of claim 35, further comprising increasing at least one of the boundary conditions of the alert for the aircraft if at least one flight characteristic of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

38. The method of claim 35, wherein the alert comprises a proximity alert.

39. The method of claim 35, wherein the alert comprises a boundary alert.

40. The method of claim 35, wherein the alert comprises an exclusive area alert.

41. The method of claim 35, further comprising reporting a result of the comparison.

42. The method of claim 35, further comprising visually reporting a result of the comparison.

43. The method of claim 35, further comprising visually reporting a modification in at least one of the boundary conditions.

44. The method of claim 35, further comprising changing an alert condition of the aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

45. The method of claim 35, further comprising increasing an alert condition of the aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

46. The method of claim 35, further comprising reporting an alert condition of the aircraft.

47. The method of claim 35, further comprising providing an alarm when at least one of the boundary conditions of the alert is crossed.

48. The method of claim 35, further comprising alerting a user of an abnormal dynamic state if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

49. The method of claim 35, further comprising modifying one or more of the flight characteristics if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one of the normal flight characteristics of the normal dynamic state.

50. The method of claim 35, further comprising modifying at least one predetermined value of at least one of the normal flight characteristics of the normal dynamic state based on a flight phase of the aircraft.

51. The method of claim 50, wherein the flight phase comprises a takeoff of the aircraft.

52. The method of claim 50, wherein the flight phase comprises the aircraft enroute.

53. The method of claim 50, wherein the flight phase comprises an approach of the aircraft.

54. The method of claim 50, wherein the flight phase comprises a landing of the aircraft.

55. The method of claim 35, wherein at least one of the flight characteristics comprises a horizontal velocity of the aircraft.

56. The method of claim 35, wherein at least one of the flight characteristics comprises a vertical velocity of the aircraft.

57. The method of claim 35, wherein at least one of the flight characteristics comprises a rate of heading change of the aircraft.

58. The method of claim 35, wherein at least one of the flight characteristics comprises an altitude of the aircraft.

59. The method of claim 35, wherein at least one of the flight characteristics comprises a speed change of the aircraft.

60. The method of claim 35, wherein at least one of the flight characteristics comprises a heading of the aircraft.

61. The method of claim 35, wherein at least one of the flight characteristics comprises an IFF signal of the aircraft.

62. The method of claim 35, wherein at least one of the flight characteristics comprises route deviation distance of the aircraft.

63. The method of claim 35, wherein at least one of the flight characteristics comprises route deviation angle of the aircraft.

64. A method for detecting and reporting an in-flight alert condition of an aircraft using a computer system, comprising:

monitoring one or more flight characteristics of the aircraft;

assessing one or more normal flight characteristics of the aircraft based on a flight phase of the aircraft;

comparing at least one of the flight characteristics to one or more of the normal flight characteristics to assess an alert condition of the aircraft; and

reporting the alert condition of the aircraft.

65. The method of claim 64, wherein the alert condition comprises an alert level for the aircraft corresponding to a danger level or threat level for the aircraft based on at least one of the flight characteristics.

66. The method of claim 64, further comprising changing the alert condition when at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

67. The method of claim 64, further comprising alerting a user of abnormal flight characteristics of the aircraft if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

68. The method of claim 64, further comprising increasing the alert condition when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.

69. The method of claim 64, further comprising increasing the alert condition to a selected level when at least one of the flight characteristics deviates from a predetermined value of at least one of the normal flight characteristics.

70. The method of claim 69, wherein the selected level of the alert condition is determined by the predetermined value of the at least one of the normal flight characteristics that has been exceeded.

71. The method of claim 64, further comprising increasing the alert condition to a first selected level when at least one of the flight characteristics deviates from a first predetermined value of at least one of the normal flight characteristics or increasing the alert condition to a second selected level when at least one of the flight characteristics deviates from a second predetermined value of at least one of the normal flight characteristics.

72. The method of claim 64, further comprising visually reporting the alert condition of the aircraft.

73. The method of claim 64, further comprising reporting the alert condition of the aircraft on a display.

74. The method of claim 64, further comprising defining a proximity alert volume around the aircraft.

75. The method of claim 74, further comprising providing an alarm if another aircraft enters the proximity alert volume.

76. The method of claim 74, further comprising increasing boundary conditions of the proximity alert volume if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

77. The method of claim 64, further comprising defining a boundary of an area, wherein the area is an area in which the aircraft is restricted from traveling.

78. The method of claim 77, further comprising providing an alarm if the aircraft crosses the area boundary.

79. The method of claim 77, further comprising increasing boundary conditions of the area boundary if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

80. The method of claim 64, further comprising defining an exclusive area for the aircraft.

81. The method of claim 80, further comprising providing an alarm if the aircraft enters the exclusive area.

82. The method of claim 80, further comprising increasing boundary conditions of the exclusive area if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

83. The method of claim 64, further comprising modifying one or more of the flight characteristics if at least one of the flight characteristics deviates from at least one of the normal flight characteristics.

84. The method of claim 64, wherein the flight phase comprises a takeoff of the aircraft.

85. The method of claim 64, wherein the flight phase comprises the aircraft enroute.

86. The method of claim 64, wherein the flight phase comprises an approach of the aircraft.

87. The method of claim 64, wherein the flight phase comprises a landing of the aircraft.

88. The method of claim 64, wherein at least one of the flight characteristics comprises a horizontal velocity of the aircraft.

89. The method of claim 64, wherein at least one of the flight characteristics comprises a vertical velocity of the aircraft.

90. The method of claim 64, wherein at least one of the flight characteristics comprises a rate of heading change of the aircraft.

91. The method of claim 64, wherein at least one of the flight characteristics comprises an altitude of the aircraft.

92. The method of claim 64, wherein at least one of the flight characteristics comprises a speed change of the aircraft.

93. The method of claim 64, wherein at least one of the flight characteristics comprises a heading of the aircraft.

94. The method of claim 64, wherein at least one of the flight characteristics comprises an IFF signal of the aircraft.

95. The method of claim 64, wherein at least one of the flight characteristics comprises route deviation distance of the aircraft.

96. The method of claim 64, wherein at least one of the flight characteristics comprises route deviation angle of the aircraft.

97. A carrier medium configured to store program instructions, wherein the program instructions are executable to implement a method, comprising:

monitoring one or more flight characteristics of an aircraft;

comparing at least one of the flight characteristics to one or more normal flight characteristics to assess an alert condition of the aircraft; and

reporting the alert condition of the aircraft.

98. A carrier medium configured to store program instructions, wherein the program instructions are executable to implement a method, comprising:

monitoring one or more flight characteristics of an aircraft;

assessing a dynamic state of the aircraft from the one or more flight characteristics;

comparing the dynamic state of the aircraft to a normal dynamic state for the aircraft; and

increasing at least one boundary condition of an alert for the aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one normal flight characteristic of the normal dynamic state.

99. A carrier medium configured to store program instructions, wherein the program instructions are executable to implement a method, comprising:

monitoring one or more flight characteristics of an aircraft;

assessing one or more normal flight characteristics of the aircraft based on a flight phase of the aircraft;

comparing at least one of the flight characteristics to one or more of the normal flight characteristics to assess an alert condition of the aircraft; and

reporting the alert condition of the aircraft.

100. A system configured to detect and report an in-flight alert condition of an aircraft, comprising:

a CPU; and

a system memory coupled to the CPU, wherein the system memory stores one or more computer programs executable by the CPU;

wherein at least one of the computer programs is executable to:

monitor one or more flight characteristics of the aircraft;

compare at least one of the flight characteristics to one or more normal flight characteristics to assess an alert condition of the aircraft; and

report the alert condition of the aircraft.

101. A system configured to detect and report a state of an aircraft, comprising:

a CPU; and

a system memory coupled to the CPU, wherein the system memory stores one or more computer programs executable by the CPU;

wherein at least one of the computer programs is executable to:

monitor one or more flight characteristics of the aircraft;

assess a dynamic state of the aircraft from the one or more flight characteristics;

compare the dynamic state of the aircraft to a normal dynamic state for the aircraft; and

increase at least one boundary condition of an alert for the aircraft if at least one of the flight characteristics of the dynamic state of the aircraft deviates from a predetermined value of at least one normal flight characteristic of the normal dynamic state.

102. A system configured to detect and report a state of an aircraft, comprising:

a CPU; and

a system memory coupled to the CPU, wherein the system memory stores one or more computer programs executable by the CPU;

wherein at least one of the computer programs is executable to:

monitor one or more flight characteristics of the aircraft;

assess one or more normal flight characteristics of the aircraft based on a flight phase of the aircraft;

compare at least one of the flight characteristics to one or more of the normal flight characteristics to assess an alert condition of the aircraft; and

report the alert condition of the aircraft.